

SECTION 02870
SITE FURNISHINGS
07/97

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

FEDERAL SPECIFICATIONS

FF-H-116E Hinges, Hardware, Builders

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

A 36/A 36m-87 Structural Steel

AMERICAN WELDING SOCIETY (AWS)

D1.1-86 Structural Welding Code-Steel

AMERICAN CONCRETE INSTITUTE (ACI)

318-8 Building Code Requirements for Reinforced
Concrete (with Commentary)

PRESTRESSED CONCRETE INSTITUTE (PCI)

MNL-116 Manual for Quality Control for Plants and
Production of Precast Prestressed Concrete
Products

MNL-120-78 Design Handbook - Precast and Prestressed
Concrete (2nd Ed., Errata)

1.2 INSPECTION OF CONDITIONS

Examine related work and surfaces before starting work of this section and report to the Contracting Officer in writing conditions which will prevent the proper provision of this work. Beginning the work of this section without reporting unsuitable conditions to the Contracting Officer constitutes acceptance of conditions. Any required removal, repair or replacement of this work caused by unsuitable conditions shall be done at no additional cost to the Government.

1.3 ACCEPTABLE MANUFACTURERS

Manufacturer named items are for standard of reference and do not necessarily limit supply to named manufacturers. Contracting Officer approved items of same physical size, function, and performance are acceptable.

1.3.1 Footings

Site furniture tables, trash receptacle, and benches shall be capable of being located directly on concrete paving finish grade with no additional reinforcement necessary to the pavement section to accommodate additional loads. Contractor shall verify with manufacturer and notify Government if additional footings and anchors are required by manufacturer specifications. All footing surfaces shall be cured to reach full design strength before placement of site amenities. For benches designated off of pavement areas, concrete footing pads shall be installed in coordination with manufacturer specifications.

1.4 DELIVERY AND HANDLING

Delivery shall be made to the job site and unloaded with a crane equipped-delivery truck as per manufacturer's recommendation. All site furnishings shall be unpacked and inspected for damage at time of delivery. Contractor shall also verify that model numbers, color, materials, etc. are as specified for the project. The Contracting Officer shall be notified of the visual confirmation.

1.5 GUARANTEE

Manufacturer shall guarantee, in writing, from defects in materials and workmanship all products supplied for a minimum period of one calendar year.

1.6 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Data

Manufacturer Information; FIO.

Submit catalog cuts, product data and color samples for Government approval. Manufacturer's installation instructions and manufacturer's warranty for all items to be provided to the Contracting Officer. Manufacturer's footing specifications and calculations shall be provided.

SD-04 Drawings

Shop Drawings; FIO.

Submit shop drawings or manufacturer details for all the following products described herein including materials, design, layout, and assembly before installation.

PART 2 PRODUCTS

2.1 BENCH

2.1.1 General

Construction shall be of precast reinforced concrete material with steel reinforcing rods used throughout, welded at all points. Bench shall be

designed to be set on standard concrete pavement section.

2.1.2 Finish

The concrete finish shall be medium sandblasted with an integral sand or tan color. Utility surfaces shall be smooth. Concrete shall be sealed with an acrylic sealant as per manufacturer's specifications. Type and color shall be approved by the by the Contracting Officer and match picnic tables and trash receptacles.

2.2 TRASH RECEPTACLE

2.2.1 General

The receptacle shall be a pre-cast concrete receptacle with rough dimensions of 25-inches square by 34 inches in height. The receptacles shall be supplied with a metal lid and plastic liner container.

2.2.2 Finish

The concrete finish shall be medium sandblasted with an integral sand or tan color. Concrete shall be sealed with an acrylic sealant as per manufacturer's specifications. The attached lid shall be a dark brown to match building metal. Type and color shall be approved by the Contracting Officer and match picnic tables and benches.

2.3 BICYCLE RACKS

2.3.1 General

The high security bike racks (3 per pad; 6 total) shall be of heavy duty construction, see detail. The racks shall be designed to be permanently installed in ground with concrete footings or 4 point expansion bolted to concrete pad.

2.3.2 Finish

Color is black or dark brown.

2.4 PICNIC TABLE

2.4.1 General

Construction shall be of precast reinforced concrete material with steel reinforcing rods used throughout, welded at all points. Bench shall be designed to be set on standard concrete pavement section.

2.4.2 Finish

The concrete finish shall be medium sandblasted with an integral sand or tan color. Utility surfaces shall be smooth. Concrete shall be sealed with an acrylic sealant as per manufacturer's specifications. Type and color shall be approved by the by the Contracting Officer and match picnic tables and trash receptacles.

2.5 BARBECUE GRILL

2.5.1 General

The barbecue shall be a all steel group sized grill with pedestal mount with rough dimensions of 36" x 28". Grill shall have separate adjustable cooking grates and be heavy duty commercial grade.

2.5.2 Finish

The grill shall be finished in a non-toxic, heat and rust-resistant black enamel.

2.6 SHADE STRUCTURES

2.6.1 General

Pre-fabricated structures (total: 2) shall be an all steel structure designed in accordance to the Uniform Building Code using: minimum live load of 30 psf; minimum wind load of 100 mph; and a minimum seismic load of Zone 4. All framing and roofing shall be factory primed with rust inhibitor and finish coated with 2 coats in field. Structure shall be hip roofed as shown on detail. Size of roof areas are as follows:

Shade Structure (Basketball Area):	16' x 16'
Shade Structure (Dining Plaza):	24' x 24'

2.6.2 Finish

Structure finish and color shall match building roofing and railing colors.

2.7 VOLLEYBALL POSTS AND NETS

2.7.1 General

Provide complete sand volleyball net system. Posts and fittings (set of 2) shall be competition grade galvanized steel with net tightener and side pulley. Posts shall be 3-1/2" O.D. Fittings shall include net tightener, side pulley, eye bolts. Net (1) shall be competition grade with steel cable top and rope bottom with nylon netting and tapes.

2.7.2 Finish

Posts and fittings shall be hot-dipped galvanized.

2.8 VOLLEYBALL COURT

2.8.1 Concrete Curb

Perimeter concrete curb 8" x 18". See detail.

2.8.2 Grading

Sub-grade shall be graded as shown on drawings to court low point. Drain to adjacent areas or turf.

2.8.3 Sand

A geotextile fabric material shall be placed on sub-grade and staked in

placed as per manufacturer recommendations. A layer of 16" minimum of clean, washed river sand shall be placed. Coordinate net post locations and installation before sand installation.

2.9 BASKETBALL COMPONENTS

Provide complete set (2) of basketball uprights, backboards, goal rings, and nets. Basketball system shall be heavy duty commercially available components designed for outdoor heavy use.

2.9.1 Uprights

Uprights shall be single or double posts of 5-9/16" O.D. Uprights shall be fitted with braceouts and appropriate fittings. Footings shall be direct burial concrete.

2.9.2 Backboards

Backboard shall be regulation rectangular shaped constructed of 1/4" galvanized steel painted white or high density polyethylene.

2.9.3 Goal Rings and Nets

Goal ring shall be a steel heavy duty double ring with steel chain net. Paint ring regulation orange.

2.10 BASKETBALL COURT STRIPING

Double shot 2" wide striping. Commercial grade pavement marking paint, white. See specification 02580 PAVEMENT MARKINGS. See landscape detail.

PART 3 EXECUTION

3.1 INSTALLATION

3.1.1 General

All site furnishings shall be located as shown on the drawings, and assembled and installed as per the manufacturer's specifications. The locations of all furnishings are to be marked in the field for the Contracting Officer's review and approval. The Contractor shall notify the Contracting Officer 24 hours in advance of needed approval of location marking. Site furnishing installation schedule shall be coordinated with other contractors to avoid conflict and possible damage.

3.1.2 Benches

Benches shall be located, leveled, and installed on finished concrete grade as shown on plans. Exact field spacing shall be as per Contracting Officer's direction.

3.1.3 Trash Receptacles

Receptacles shall be located, leveled, and set on finished concrete grade as shown on plans. Exact field spacing shall be as per Contracting Officer's direction.

3.1.4 Picnic Tables

Tables shall be located, leveled, and installed on finished concrete grade as shown on plans. Exact field spacing shall be as per Contracting Officer's direction.

3.1.5 Bicycle Racks

Racks shall be permanently installed and shall be coordinated with concrete installation. Install in location as shown on plans. Racks shall be installed as per manufacturer's specifications.

3.1.6 Barbecue Grill

Install in ground as per manufacturer specifications. Exact locations in field as per Contracting Officer's direction.

3.1.7 Shade Structures

Coordinate installation with other work of grading, concrete, electrical. Install as per manufacturer specifications. Touch up all damaged primer coating areas and paint with 2 coats of finish paint. Layout and orient to field conditions and concrete work. Contracting Officer shall approved all layouts.

3.1.8 VOLLEYBALL POSTS AND NETS

Install as per manufacturer specifications. First stakeout court layout to center court and posts in court area.

3.1.9 VOLLEYBALL COURTS

3.1.9.1 Concrete Curb

Field stake court area before excavation and curb forming. Verify grades and drainage. Install concrete curb to maintain court dimensions and grades. Layout approved by Contracting Officer.

3.1.9.2 Grading

Sub-grade shall be sloped a minimum of 2% to a corner sump, court low point. Sump shall be 3' x 3' x 5' deep filled with aggregate base rock and covered by staked filter fabric.

3.1.9.3 Sand

A continuous geotextile fabric material shall be placed on sub-grade and staked in placed as per manufacturer recommendations. A layer of 16" minimum of clean, washed river sand shall be carefully placed to not disturb grades or geotextile. Coordinate net post locations and installation before sand installation.

3.1.10 BASKETBALL BACKBOARD

Upon completion of the installation of all site furnishings, all debris and surplus materials resulting from the work shall be removed from the furnishings and site. Furnishings shall be washed and

Coordinate with court concrete installation and striping. Install as per

manufacturer specifications for regulation layout.

3.1.11 BASKETBALL COURT STRIPING

Coordinate with concrete installation. Clean and/or wash concrete area as required to provide a suitable surface for painting. Layout all lines first for Contracting Officer approval. All over spray and drips shall be removed immediately.

3.2 CLEAN-UP

3.2.1 General

General wiped clean with all tags and labels removed.

-- End of Section --